

U.S. Patent Application Serial No. 09/768,178
Response dated January 22, 2004
Reply to OA of **October 27, 2003**

REMARKS

Claims 10-29 are pending in this case. Claims 5 and 9 have been canceled without prejudice or disclaimer.

Claims 6-7 were inadvertently canceled in the Amendment filed on August 4, 2003. Accordingly, these claims and claims 5 and 9, have been rewritten as new claims 10-29 to more clearly and completely define the present invention. No new matter has been added.

In view of new claims 10-29, and the remarks set forth below, further and favorable reconsideration, is respectfully requested.

I. At page 2, paragraph 3, of the Office Action, claims 5 and 9 have been rejected under 35 USC § 112, second paragraph, as being indefinite.

The Examiner states that Applicant has failed to define the ultraviolet-curable composition, i.e., it is unclear as to what the composition actually is.

Claims 5 and 9 have been canceled without prejudice and have been rewritten as new claims 10-12.

Claim 10 has been written commensurate in scope with claim 5, and recites that the ultraviolet composition is a polymerizable composition including at least one of a monomer and an oligomer having a carboxyl group, where the composition is capable of being cured by UV radiation, and is composed such that a pH of a 1.0 wt% methanol solution of the polymerizable composition is within the range of 4.5 to 6.8.

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Claim 11 has been written to require that the ultraviolet curable composition includes at least one of a monomer and an oligomer having a carboxyl group and an optical recording medium including a recording layer and a reflective film, where the composition is provided on the reflective layer of an optical recording medium, to form a protective layer when cured. Claim 12 has been written to positively recite the ultraviolet curable composition, and includes the limitations of original claim 6.

It is submitted that the newly added claims are clear and definite within the meaning of 35 USC § 112, second paragraph. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

III. At page 3, paragraph 5, of the Office Action, claims 15 and 9, have been rejected under 35 USC § 103 (a), as being unpatentable over Suzuki et al. (US 5,573,831).

The Examiner states that it would be obvious to the skilled artisan to modify the Suzuki composition to include the present pH and weight percent, since it has been held that the optimization of results effective variables, involves only routine skill. Regarding claim 9, the Examiner states that a process limitation in a product claim does not constitute a claim limitation, i.e., "formed by curing..." A brief analysis of Suzuki is set forth below.

Suzuki discloses an optical recording medium including a recording layer on a transparent substrate, a metal reflective layer provided on the recording layer, and at least one protective layer having a thickness of 1 to 100 microns provided on the metal layer, where the protective layer is

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formed from an ultraviolet curable resin containing an organic filler and/or an inorganic filler having water absorbency and/or oil absorbency, where the filler is present in an amount of from 1 to 80 parts by weight so that the protective layer has a printable surface.

Suzuki discloses that an additional protective layer including a UV curable composition without a filler, can be provided between the reflective layer and the printable protective layer.

The metal reflective layer of Suzuki can include Au, Al, Pt, Ag, and Ni, or alloys thereof. Suzuki states that gold (Au) is preferable. Example 2 of Suzuki discloses a resin composition including trimethylolpropanetriacrylate, Irugacure 184, urethane acrylate oligomer, mixed with a filler.

Suzuki requires mixing the ultraviolet curable composition (of layer 5) with a particulate filler in order to impart oil and/or water absorbing properties to the printable protective layer.

In view of the following, this rejection is respectfully overcome.

Claims 5 and 9 have been canceled and rewritten as new claims 10-12 to positively recite the claimed invention, and to more clearly define the invention. Claim 10 corresponds to canceled claim 5 and includes the limitations of previously canceled claim 6.

Suzuki is concerned with providing a printable protective layer where the ink of a pen or printer is not repelled by the coating film (printable protective film, i.e., layer 5). Suzuki states at col. 2, lines 17-21, that typical UV curable resins of sufficient hardness, repel ink. Suzuki is also concerned with providing a low cost, solvent free, system.

Suzuki solves the prior art problem of ink repel by providing a printable protective layer

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including a UV curable composition containing a filler where the filler is water absorbent and/or oil absorbent, and where the printable layer is provided over a protective layer, or on a metal reflective layer.

The present invention is concerned with problems of durability and error. The invention improves the durability of the reflective film under conditions of high heat and humidity, by providing the claimed ultraviolet curable composition as a cured film on the reflective film of the optical recording medium where Ag is the main component of the reflective film.

In view of the foregoing, it is submitted that the Declaration filed on December 2, 2002 and dated November 11, 2002 by Shoji, a copy of which is enclosed herewith, establishes that the UV curable compositions of Suzuki do not exhibit a pH that falls within the presently claimed range.

Further, regarding the Examiner's contention that wt% and pH are routinely optimizable "results effective variables" it is submitted that a *prima facie* case of obviousness has not been established. A *prima facie* case of obviousness requires that analogous prior art provide some suggestion or motivation to modify their disclosed compositions, in order to obtain the claimed invention, and must provide a reasonable expectation of success.

The court in *In re O'Farrell*, 853 F.2d 894 (Fed. Cir. 1988) held that it would be "obvious to try" in the case where the prior art either gave no direction as to which of many possible choices is likely to be successful or no indication of which parameters were critical.

In the present case, Suzuki does not teach or suggest that the pH of the UV curable composition is a factor whatsoever, let alone suggest that it is a factor that should be modified, let

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alone modified to be more acidic or basic. Moreover, Suzuki does not suggest that durability of the reflective layer is a problem, and does not suggest improving durability of the reflective layer, let alone improving durability by modifying pH, as presently required.

In view of the foregoing, it is submitted that at most, Suzuki may give rise to an “obvious to try” situation. “Obvious to try” is not the proper standard for patentability under 35 USC § 103.

Assuming *arguendo a prima facie* case of obviousness established, the Declaration under rule 1.132, submitted on December 2, 2002, and dated November 11, 2002, establishes the unobviousness of the presently claimed invention.

Specifically, Examples 1-4 when compared with Comparative Examples 1 and 2 of the present application, illustrate that the ultraviolet curable compositions having pH values in 1 wt% methanol solutions outside the range of 4.5 to 6.8 exhibit wrong C1 errors which show inferior durability. Please see Table 1 of the present specification. The Declaration further establishes that the ultraviolet curable compositions of Suzuki have pH values in 1 wt% methanol solutions far outside the range of 4.5 to 6.8.

Regarding claims 17-19, the present ultraviolet curable composition is a “solution” or a “homogeneous liquid” and as such does not contain particulate matter. Suzuki does not teach or suggest a composition that is a solution or a homogeneous liquid. Specifically, Suzuki’s layer 5 requires a particulate filler prior to formation of the layer.

Claim 13 corresponds to previously canceled claim 7. Proposed claims 14-16 correspond

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to canceled claim 9. Claims 14 and 15 have been written to remove the process limitation and to positively recite that the optical recording medium includes a protective film comprising a cured film of an ultraviolet curable composition.

Claim 16 is dependent on claim 14 or 15, and requires a recording layer and a reflective film, where the protective film is provided on and is in communication with, the reflective layer.

In view of the foregoing remarks, the previously filed Declaration, and new claims 10-29, it is submitted that nothing in Suzuki, renders the claimed invention obvious within the meaning of 35 USC § 103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

III. At page 4, paragraph 6, of the Office Action, claim 5 has been rejected under 35 USC § 103 (a) as being unpatentable over Gaske et al. (US 4,127,460).

The Examiner states that Gaske teaches an ultraviolet curable aqueous emulsion composition having a pH in the range of 5.0 to 8.5, and that Gaske teaches that various alcohols can be utilized with the composition. A brief analysis of Gaske is set forth below.

Gaske is directed to a radiation-curable aqueous emulsion coating composition which cures to provide a non-adherent surface which is provided by emulsifying droplets of liquid alkyl hydrogen polysiloxane in water, the water having dispersed therein a radiation-curable polyethylenically unsaturated tertiary amine, partially neutralized with a solubilizing acid.

Gaske does not teach or suggest an ultraviolet curable composition including at least one of

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a monomer and an oligomer having a carboxyl group, as presently required.

Claim 5 has been canceled and rewritten as new claims 10-12, requiring at least one of a monomer and an oligomer having a carboxyl group.

Regarding claims 17-19, Gaske does not teach or suggest a solution or a homogeneous liquid. Rather, Gaske requires an emulsion composition.

In view of new claims 10-12 and the remarks set forth above, it is submitted that nothing in Gaske renders the claimed invention obvious within the meaning of 35 USC § 103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Declaration under 37 CFR 1.132